The Impact of Foreign Direct Investment on Gender Equality in Developed and Developing Countries

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ABSTRACT

Gender equality must be prioritized in developed and developing countries to achieve the United Nations Sustainable Development Goals (SDGs). Governments in many countries have implemented measures to address issues of gender disparity. Multinational enterprises (MNEs) promote diverse and inclusive policies but the impact of foreign direct investment (FDI) on gender equality differs across nations. This study used dynamic panel data to assess the influence of inward FDI on gender equality in developed and developing host countries. Secondary information was collected as panel data from 29 developed and 30 developing nations between 2006 and 2021. Results suggested that more inward FDI reduced gender inequality only in developed host countries. Governments should encourage FDI and offer incentives to MNEs in developing countries to promote gender equality.

Keywords: foreign direct investment; gender equality; SDGs.

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1. INTRODUCTION

Achieving gender equality as one of the 17 UN Sustainable Development Goals (SDGs) is a significant challenge that also promotes the attainment of other SDGs such as zero poverty, good health and well-being, and zero hunger. Reducing gender gaps and strengthening women's rights are critical to realize sustainable and inclusive growth. Kabeer and Natali (2013) discovered that gender equality, particularly in education and employment, stimulates economic growth.

Foreign direct investment (FDI) has grown in importance in the global economy in recent decades as a result of globalization, technological improvements, and investment policy liberalization. FDI impacts the economies, communities, and environments of host countries and leads to technology spillover (Dheera-aumpon, 2024). FDI also impacts gender equality in host countries. Multinational enterprises (MNEs) incrementally implement diverse policies that include gender equality. Over 40% of MNEs in developing economies have implemented internal diversity policies that mirror those in 70% of advanced nations (UNCTAD, 2021). Increased inward FDI leads to improved gender equality; however, FDI may increase the wage difference between

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male and female workers (Davis and Poole, 2021). As a result, the impact of FDI on gender equality remains ambiguous and varies by host country. This study investigated the impact of FDI on gender equality in developed and developing countries.

2. LITERATURE REVIEW

The OECD (2021) states that FDI impacts gender outcomes either directly or indirectly through commercial links and market interactions with domestic enterprises such as MNE activities, value-chain relationships, competition and imitation effects, and labor mobility. FDI specifically affects women in host countries through direct employment operations such as recruiting, remuneration, training, promotion, and benefits while also generating employment opportunities for local women in domestic enterprises by utilizing value-chain connections with local suppliers and customers. Increased profits and job opportunities created by foreign firms may compel local competition to respond by improving women's working conditions. The activities of multinational firms impact gender equality in local enterprises via imitation. Previous MNE work experience helps women achieve better employment in domestic enterprises via labor mobility. Women may also use the expertise they gained at MNEs to launch their own businesses. However, MNEs may cause job losses for women if domestic firms, particularly women-owned businesses, downsize or liquidate.

According to previous research, the impacts of FDI on gender equality differ among academics. One group considers that FDI promotes gender equality. Majeed and Azid (2020) discovered that FDI benefited women's political rights in Organization of Islamic Cooperation (OIC) countries while Ouedraogo and Marlet (2018) revealed that FDI inflows improved women's welfare and reduced gender inequality. However, this impact was less in countries where women have limited access to resources and face higher challenges when starting a business. Conversely, the second group posits that FDI erodes gender equality. Poole, Santos-Paulino, and Pham (2020) found that multinational firms in Vietnam employed fewer women and had higher gender wage gaps than their domestic equivalents, while Davis and Poole (2021) reported similar results in Brazil.

When considering other determinants, education level plays an important role in promoting gender equality and influencing various aspects of society from economic participation to social norms and empowerment (Banerjee et. al., 2023; Singh and Mehta, 2018). Anyanwu (2016) and Sajid (2014) found that GDP per capita improved gender equality. Moreover, trade promotes gender equality by increasing women's welfare and creating better jobs for women (World Bank and WTO, 2020). Juhn et.al. (2013) found that the reduction in tariffs induced more productive firms, which resulted in the improvement of the relative wage and employment of blue-collar women workers. Furthermore, Kim (2021) indicated that institutions were the crucial determinant of gender equality. Therefore, education, GDP per capita, trade openness, and institutional environment were included as variables in this study. In addition, good institutions also result in better FDI utilization (Sabir et. al., 2019), which can lead to better gender equality. Thus, the interaction term between FDI and institutional environment was also included in the specification of both developed and developing country models.

3. METHODOLOGY

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3.1. Data Collection

Secondary information was collected as panel data from 29 developed and 30 developing nations (including those in transition) between 2006 and 2021. Data for each variable were collected from the following sources:

- Gender inequality index of each host country (GI), collected from the UNDP
- Inward FDI stock of each host country (FDI), collected from the UNCTAD
- Each host country's GDP per capita (CGDP), collected from the World Bank
- Mean years of schooling in each host country (ED), collected from the UNDP
- Trade openness of each host country (OPEN), collected from the World Bank
- Institutional environment of each host country (INSTI), calculated by using 6 dimensions of Worldwide Governance Indicators (WGI) collected from Kaufmann and Kraay (2023)

The institutional environment is an index calculated by the following formula:

$$\mathrm{INSTI}_{\mathrm{it}} = \frac{\sum_{k=1}^{6} Z_{kit}}{6},$$

where Z_{kit} is the Z-score of dimension k of host country i in period t. The six dimensions of WGI consist of voice and accountability; political stability and absence of violence/terrorism; government effectiveness; regulatory quality; rule of law; and control of corruption.

3.2. Data Analysis

The impact of inward FDI on gender equality in the host countries was examined using the developed and developing country models. Table 1 lists the descriptive statistical values of the variables used in model testing for heteroskedasticity.

Table 1 Descriptive Statistics of Variables

Developed countries				
Variable	Mean	Standard deviation	Minimum	Maximum
GI	0.122317	0.072652	0.013	0.369
FDI	610,076	1,234,908	23,482.62	1.36E+07
CGDP	39,739.61	22,775.15	5,629.42	112,417.9
ED	12.06251	1.248637	7.61731	14.13215
OPEN	4.526547	0.585362	3.152042	5.961316
INSTI	4.360358	3.048002	-2.98304	8.474105
Developing countries				
Variable	Mean	Standard deviation	Minimum	Maximum
GI	0.360286	0.148858	0.04	0.688
FDI	206,255.3	298,011.9	868.248	2,064,018
CGDP	11,390.11	12,168.14	1,014.628	66,176.39

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ED	8.981864	2.180152	3.88	13.34487
OPEN	4.227942	0.566668	2.794362	6.08068
INSTI	-4.21501	3.880105	-11.1981	7.659321

Source: Authors' calculation

A dynamic panel data analysis assessed the several specifications of each model (the developed model and developing country model) using the equations below:

$$GI_{it} = f\,(GI_{it-1}, lnFDI_{it}, lnCGDP_{it}, lnED_{it}, lnOPEN_{it}) \quad \text{--- (1)}$$

$$GI_{it} = f\,(GI_{it-1}, lnFDI_{it}, lnCGDP_{it}, lnED_{it}, lnOPEN_{it}, INSTI_{it}) \quad \text{--- (2)}$$

$$GI_{it} = f\,(GI_{it-1}, lnFDI_{it}, lnCGDP_{it}, lnED_{it}, lnOPEN_{it}, INSTI_{it}, lnFDI_{it} x\ INSTI_{it}) \quad \text{--- (3)}$$

where

GI_{it} is the gender inequality index of the host nation i in period t (a higher GI implies greater gender inequality),
GI_{it-1} is the gender inequality index of host nation i in period t-1,
$lnFDI_{it}$ is the inward FDI stock of host nation i in period t in natural log form,
$lnCGDP_{it}$ is the GDP per capita of host nation i in period t in natural log form,
$lnED_{it}$ is the mean years of schooling of host nation i in period t in natural log form,
$lnOPEN_{it}$ is the trade openness of host nation i in period t in natural log form, and
$INSTI_{it}$ is the institutional environment index of host nation i in period t.

4. RESULTS AND RECOMMENDATIONS

Heteroskedasticity was present in both models. Thus, a dynamic panel data analysis with a robust standard error was used to evaluate the effect of FDI on gender equality in both models. The results for developed host countries revealed that FDI, mean years of schooling, and trade openness significantly improved gender equality in all three specifications (Table 2). In developing host countries, GDP per capita and mean years of schooling resulted in significantly improved gender equality in all three specification (Table 3). Results indicated that inward FDI improved gender equality only in developed host countries.

Table 2 The effect of FDI on Gender Equality for developed countries

Variable	Coefficient		
	(1)	(2)	(3)
constant	0.420	0.422	0.436
	(0.013)**	(0.011)**	(0.007)***
GI_{it-1}	0.814	0.814	0.811
	(0.000)***	(0.000)***	(0.000)***
$lnFDI_{it}$	-0.005	-0.005	-0.006
	(0.043)**	(0.043)**	(0.099)*
$lnCGDP_{it}$	-0.013	-0.013	-0.013
	(0.147)	(0.143)	(0.167)

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$lnED_{it}$	-0.056	-0.057	-0.056
	(0.043)**	(0.037)**	(0.046)**
$lnOPEN_{it}$	-0.014	-0.014	-0.015
	(0.008)***	(0.007)***	(0.016)**
$INSTI_{it}$	-	-0.0001	-0.003
		(0.934)	(0.712)
lnFDIxINSTI	-	-	0.000
			(0.723)
Wald $chi^2(4)$	2,171.00	2,420.26	2,434.32
Prob > chi^2	0.000***	0.000***	0.000***
Number of groups	29	29	29
Number of observations	406	406	406

Note: ***, **, and * indicate 0.01, 0.05, and 0.1 significance levels, respectively.
The numbers in parentheses are P-value.
Source: Author's calculation

Table 3 The effect of FDI on Gender Equality for developing countries

Variable	Coefficient		
	(1)	(2)	(3)
constant	0.530	0.560	0.549
	(0.029)**	(0.023)**	(0.012)**
GI_{it-1}	0.689	0.691	0.691
	(0.000)***	(0.000)***	(0.000)***
$lnFDI_{it}$	-0.003	-0.002	-0.001
	(0.613)	(0.661)	(0.806)
$lnCGDP_{it}$	-0.023	-0.028	-0.028
	(0.093)*	(0.021)**	(0.025)**
$lnED_{it}$	-0.111	-0.107	-0.108
	(0.080)*	(0.082)*	(0.089)*
$lnOPEN_{it}$	0.014	0.015	0.015
	(0.205)	(0.177)	(0.180)
$INSTI_{it}$	-	0.002	0.000
		(0.241)	(0.961)
lnFDIxINSTI	-	-	0.000
			(0.836)
Wald $chi^2(4)$	755.94	874.17	1,153.46
Prob > chi^2	0.000***	0.000***	0.000***

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Number of groups	30	30	30
Number of observations	413	413	413

Note: ***, **, and * indicate 0.01, 0.05, and 0.1 significance levels, respectively.
The numbers in parentheses are P-value.
Source: Author's calculation

This positive effect of FDI on gender equality in developed countries concurred with Majeed and Azid (2020) and Ouedraogo and Marlet (2018). Conversely, the insignificance of FDI in developing countries implied mixed effects of FDI on gender equality across the host countries. Women in developing countries often have low access to resources such as education (King and Hill, 1993) and information technology (Hafkin and Taggart, 2001). Thus, the impact of FDI on gender equality is minimal in areas where women have restricted access to resources and bears a disproportionate cost when starting a business (Ouedraogo and Marlet, 2018). FDI may lead to a higher wage gap (Santos-Paulino and Pham, 2020) if concentrated in male-dominant industries. Therefore, the impact of FDI on gender equality varied among host countries.

Results suggested that governments in host countries should promote inward FDI, particularly from MNEs with gender improvement policies, while also promoting factors that attracted FDI such as GDP, information about culture (Dheera-aumpon and Changwatchai, 2020), endowment, trade openness (Blonigen and Piger, 2014), and institutional environment (Dheera-aumpon and Changwatchai, 2024; and Obalade, 2024). The government should also enhance FDI screening mechanisms to attract MNEs that focused on gender equality. In developing countries, governments should provide incentives for MNEs that promoted gender equality, for example, an income tax rebate to spend on gender-related policies.

5. CONCLUSION

Achieving gender equality is critical to meet the 17 UN Sustainable Development Goals (SDGs). FDI impacted gender outcomes either directly through the actions of foreign MNEs or indirectly in both positive and negative ways. The impact of FDI on gender equality varied between developed and developing host nations. This study investigated the impact of FDI on gender equality in developed and developing nations. Results indicated that greater inward FDI reduced gender disparity only in developed host nations. The governments of host countries should encourage inward FDI, especially from MNEs practicing gender improvement policies. In developing countries, the government should offer incentives to MNEs that promoted gender equality.

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REFERENCES

[1] Anyanwu, J.C. (2016), "Analysis of gender equality in youth employment in Africa", *African Development Review,* 28, 397-415.

[2] Banerjee, S., Swati, A., Kumar, R., George, B. (2023), "Intrahousehold Personal Decision-making Power as a Measure of Women Empowerment and Its Effect on Children's Education- A Study of Rural India", *Review of Integrative Business and Economics Research*, 12(2), 118-135.

[3] Blonigen, B. A., Piger, J. (2014), "Determinants of foreign direct investment", *Canadian Journal of Economics*, 47(3), 775-812.

[4] Davis, C.A., Poole, J.P. (2021), "Can multinational firms promote gender equality? The role of labour mobility", *Transnational Corporations Journal*, 27(3), 157-181.

[5] Dheera-aumpon, S. (2024), "Home-Country R&D and Productivity Spillovers from FDI in Thailand", *Review of Integrative Business and Economics Research*, 13(1), 43-50.

[6] Dheera-aumpon, S., Changwatchai, P. (2020), "Cultural distance and foreign direct investment stock in Thailand: Evidence from panel data", *Economics and Sociology*, 13(4), 81-96.

[7] Dheera-aumpon, S., Changwatchai, P. (2024), "The effect of institutional distance on foreign direct investment in Thailand", *International Journal of Monetary Economics and Finance*, 17(2-3), 221-228.

[8] Hafkin, N., Taggart, N. (2001), *Gender, Information Technology, and Developing Countries: An Analytic Study*, Office of Women in Development, Bureau for Global Programs, Field Support and Research, United States Agency for International Development.

[9] IMF. (2000), *Transition Economies: An IMF Perspective on Progress and Prospects*, Washington, D.C.

[10] Juhn, C., Ujhelyi, G., Villegas-Sanchez, C. (2013), "Trade Liberalization and Gender Inequality", *American Economic Review,* 103(3), 269–73**.**

[11] Kabeer, N., Natali, L. (2013), "Gender Equality and Economic Growth: Is there a Win-Win?", *IDS Working Papers*, 2013(417).

[12] Kaufmann, D, Kraay, A. (2023). *Worldwide Governance Indicators, 2023 Update,* (www.govindicators.org).

[13] Kim, S. Y. (2021), "Determining critical factors of gender inequality: Evidence from 34 OECD and non-OECD countries", *World Development Perspectives*, 21, 100284.

[14] King, E. M., Hill M. A. (1993), *Women's education in developing countries: Barriers, benefits, and policies*, World Bank Group.

[15] Majeed, M.T., Azid, T. (2020), "Women Empowerment and Globalization Evidence from the Organisation of Islamic Cooperation (OIC) Countries", In Azid, T. & Ward-Batts, J. L. (Eds), *Economic Empowerment of Women in the Islamic World: Theory and Practice,* 191-216.

[16] Obalade, A. (2024), "Finance, Growth, and Institutional Framework in Emerging Countries", *Review of Integrative Business and Economics Research*, 13(2), 347-354.

ISSN: 2304-1013 (Online); 2304-1269 (CDROM); 2414-6722 (Print)

[17] OECD. (2021), FDI *Qualities Policy Toolkit: Policies for improving the sustainable development impacts of investment*, OECD Publishing, Paris.
[18] OECD. (2022), *FDI Qualities Review of Jordan: Strengthening Sustainable Investment*, OECD Publishing, Paris.
[19] Ouedraogo, R., Marlet, E. (2018), "Foreign Direct Investment and Women Empowerment: New Evidence on Developing Countries", *IMF Working Papers,* 18(25).
[20] Poole, J. P., Santos-Paulino, A. U., Pham, A. (2020), "Foreign Investment and Female Employment in Viet Nam", *Transnational Corporations Journal*, 27(3), 133-155.
[21] Sabir, S., Rafique, A., Abbas, K. (2019), "Institutions and FDI: evidence from developed and developing countries", *Financial Innovation,* 5, Article number 8.
[22] Sajid, S. (2014), "Political Economy of Gender Equality: Case Study of Pakistan" *International Journal of Gender and Women's Studies,* 2(2), 309-340.
[23] Singh, D., Mehta, S. (2018), "Role of Education in Empowering Women Towards Gender Equality and SDGs: A Case of Delhi", *IOSR Journal Of Humanities And Social Science*, 23(40), 45-57.
[24] Stolzenburg, V., Matthee, M., Janse van Rensburg, C., Bezuidenhout, C. (2020), "Foreign Direct Investment and Gender Inequality: Evidence from South Africa", *Transnational Corporations Journal,* 27(3), 93-113.
[25] UN. (2022), *World Economic Situation and Prospects 2022.* New York.
[26] UNCTAD. (2021), *World Investment Report 2006: FDI from Developing and Transition Economies: Implications for Development*. Geneva.
[27] UNDP. (2022a). *Human Development Report 2021-22: Uncertain Times, Unsettled Lives: Shaping our Future in a Transforming World.* New York.
[28] UNDP. (2023a), *Gender Inequality Index*. New York.
[29] UNDP. (2023b), Latest Human Development composite indices tables. New York.
[30] World Bank, WTO. (2020), *Women and Trade: The Role of Trade in Promoting Gender Equality*. Washington, DC.

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